What is claimed is:

1. A polymer powder for use in a layer-by-layer process in which regions of the respective pulverulent layer are selectively melted via unfocused introduction of electromagnetic energy,
which
comprises at least one thermoplastic random copolymer with an ISO 1133 MFR value of from 12 to 1 g/10 min.

2. The polymer powder as claimed in claim 1,
which
comprises at least one thermoplastic random copolymer with an ISO 1133 MFR value of from 10 to 1 g/10 min.

3. The polymer powder as claimed in one of the preceding claims,
which
comprises at least one thermoplastic random copolymer with an ISO 1133 MFR value of from 12 to 1 g/10 min, the selectivity being achieved via application of susceptors or of absorbers, or via masks.

4. The polymer powder as claimed in one of the preceding claims,
which
comprises at least one thermoplastic random copolymer with an ISO 1133 MFR value of from 10 to 1 g/10 min, the selectivity being achieved via application of susceptors or of absorbers, or via masks.

5. The polymer powder as claimed in any of the preceding claims,
which
comprises at least one thermoplastic random copolymer with an ISO 1133 MFR value of from 12 to 1 g/10 min, the selectivity being achieved via application of inhibitors.

6. The polymer powder as claimed in at least one of claims 1 to 5,
which
comprises at least one copolyester.

7. The polymer powder as claimed in claim 6,
which
comprises at least one copolyester containing at least one of the monomer units from the group of adipic acid, isophthalic acid, dimethyl phthalate, 1,4-butanediol, 1,6-hexanediol, polyethylene glycol.

8. The polymer powder as claimed in at least one of claims 1 to 5,
which
comprises at least one copolyamide.

9. The polymer powder as claimed in claim 8,
which
comprises at least one copolyamide containing at least one of the units from the group of the lactams, the diamine/dicarboxylic acid salts, and/or the aminocarboxylic acids.

10. The polymer powder as claimed in claim 8 or 9,
which
comprises at least one copolyamide containing at least one of the units from the group of laurolactam, caprolactam, aminoundecanoic acid, and also containing approximately equimolar amounts of the dicarboxylic acids adipic acid, sorbic acid, azelaic acid, sebacic acid, dodecanedioic acid, brassylic acid, tetradecanedioic acid, pentadecanedioic acid, octadecanedioic acid, terephthalic acid, isophthalic acid, and of the diamines hexamethylenediamine, 2-methylpentamethylenediamine, 2,2,4-trimethylhexamethylenediamine, 2,4,4-tri-

methylhexamethylenediamine, isophoronediamine, piperazine, bis(4-aminocyclohexyl)methane, or of the nylon salts formed therefrom.

11. The polymer powder as claimed in any of claims 8 to 10,
which
comprises at least one copolyamide containing caprolactam, laurolactam, and AH salt.

12. The polymer powder as claimed in any of claims 8 to 10,
which
comprises at least one copolyamide containing caprolactam, laurolactam, and DH salt.

13. The polymer powder as claimed in any of claims 8 to 10,
which
comprises at least one copolyamide containing caprolactam and laurolactam.

14. The polymer powder as claimed in any of claims 8 to 13,
which
comprises at least one copolyamide, the DIN 53727 relative solution viscosity in m-cresol being from 1.55 to 1.9.

15. The polymer powder as claimed in at least one of claims 8 to 13,
which
comprises at least one copolyamide, the DIN 53727 relative solution viscosity in m-cresol being from 1.6 to 1.7.

16. The polymer powder as claimed in at least one of claims 1 to 15,

which
comprises auxiliaries and/or filler and/or pigments.

17. The polymer powder as claimed in claim 16, which
comprises flow aids as auxiliary.

18. The polymer powder as claimed in claim 16, which
comprises glass particles as filler.

19. The polymer powder as claimed in claim 16, which
comprises metal soaps as auxiliary.

20. A process for producing moldings via a layer-by-layer process in which regions of the respective polymer powder layer are selectively melted via unfocused introduction of electromagnetic energy, using powder as claimed in at least one of claims 1 to 19.

21. A process for producing moldings via a layer-by-layer process, in which regions of the respective polymer powder layer are selectively melted, the selectivity being achieved via masks, using powder as claimed in at least one of claims 1 to 19.

22. A process for producing moldings via a layer-by-layer process, in which regions of the respective polymer powder layer are selectively melted, the selectivity being achieved via the application of inhibitors, using powder as claimed in at least one of claims 1 to 19.

23. A process for producing moldings via a layer-by-layer process in which regions of the respective polymer powder layer are selectively melted, the selectivity being achieved by applying absorbers, using

powder as claimed in at least one of claims 1 to 19.

24. A process for producing moldings via a layer-by-layer process in which regions of the respective polymer powder layer are selectively melted, the selectivity being achieved via application of susceptors, using powder as claimed in at least one of claims 1 to 19.

25. A molding produced via one of the processes of claims 20 to 24
which
comprises a thermoplastic random copolymer with an ISO 1133 MFR value of from 12 to 1 g/10 min.

26. The molding as claimed in claim 25,
which
comprises at least one copolyester.

27. The molding as claimed in claim 25 or 26,
which
comprises at least one copolyester containing at least one of the monomer units from the group of adipic acid, isophthalic acid, dimethyl phthalate, 1,4-butanediol, 1,6-hexanediol, polyethylene glycol.

28. The molding as claimed in claim 25,
which
comprises at least one copolyamide.

29. The molding as claimed in claim 25 or 28,
which
comprises at least one copolyamide containing at least one of the units from the group of the lactams, the diamine/dicarboxylic acid salts, and/or the aminocarboxylic acids.

30. The molding as claimed in any of claims 25, 28 and

29,
which
comprises at least one copolyamide containing at least one of the units from the group of laurolactam, caprolactam, aminoundecanoic acid, and also containing approximately equimolar amounts of the dicarboxylic acids adipic acid, sorbic acid, azelaic acid, sebacic acid, dodecanedioic acid, brassylic acid, tetradecanedioic acid, pentadecanedioic acid, octadecanedioic acid, terephthalic acid, isophthalic acid, and of the diamines hexamethylenediamine, 2-methylpentamethylenediamine, 2,2,4-trimethylhexamethylenediamine, 2,4,4-trimethylhexamethylenediamine, isophoronediamine, piperazine, bis(4-aminocyclohexyl)methane, or of the nylon salts formed therefrom.

31. The molding as claimed in any of claims 25, 28 and 29,
which
comprises at least one copolyamide containing caprolactam, laurolactam, and AH salt.

32. The molding as claimed in any of claims 25 and 28 to 29,
which
comprises at least one copolyamide containing caprolactam, laurolactam, and DH salt.

33. The molding as claimed in any of claims 25 and 28 to 30,
which
comprises at least one copolyamide containing caprolactam and laurolactam.

34. The molding as claimed in any of claims 25 and 28 to 33,
which

comprises at least one copolyamide, the DIN 53727 relative solution viscosity in m-cresol being from 1.55 to 1.9.

35. The molding as claimed in any of claims 25 and 28 to 34,
which
comprises at least one copolyamide, the DIN 53727 relative solution viscosity in m-cresol being from 1.6 to 1.7.

36. The molding as claimed in any of claims 25 to 35, which
comprises auxiliaries and/or filler and/or pigments.

37. The molding as claimed in claim 36
which
comprises flow aids as auxiliary.

38. The molding as claimed in claim 36,
which
comprises glass particles as filler.

39. The molding as claimed in claim 36,
which
comprises metal soaps as auxiliary.

40. A process as claimed in at least one of claims 20 to 24,
which comprises
processing the polymer powder at a construction chamber temperature of from 80 to 160°C.

41. A process as claimed in at least one of claims 20 to 24,
which comprises
processing the polymer powder at a construction chamber temperature of from 85 to 120°C.